UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,010	07/19/2001	Mark L. Adams	TI-32539	8727

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TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER
NGUYEN, QUYNH H

ART UNIT	PAPER NUMBER
2642	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/909,010	ADAMS, MARK L.
	Examiner	Art Unit	
	Quynh H Nguyen	2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2001*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-10* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on 19 July 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *1/27/03*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

complete spelling for acronyms should be used the first time in the specification.

For example, complete spelling for acronyms MIDI, OMAP, ASIC...

Appropriate correction is required.

Claim Objections

2.   Claims 1, 4, 6, and 7 are objected to because of the following informalities:

complete spelling for acronyms should be used the first time in each independent

claim. For example, claim 1 line 1 "...implementing MIDI synthesis..." should be

--... implementing Musical Instrument Digital Interface (MIDI) synthesis...--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kawashima (U.S. Patent 6,549,767) in view of Arnold et al. (U.S. Patent

5,908,997).

Regarding claims 1, 4, and 6, Kawashima teaches a method of implementing MIDI synthesis comprising the steps of: providing a wireless handset (portable telephone 1) having dual processor a general purpose processor CPU 10 and a digital signal processor (Fig. 2, tone generator 33 employs a DSP and col. 22, lines 56-58), musical data stored in the RAM 11 or flash memory (col. 21, lines 42-44), a digital to analog converter DAC 35 and DSP peripherals to drive the DAC; time stamping the MIDI commands format to render audio signals to the DAC (col. 6, lines 60-65).

Kawashima does not teach interrogating the flash memory via the GPP to open a MIDI bit stream and determine sample sets to be loaded into a DSP memory associated with the DSP, loading via the GPPP a DSP code associated with the sample sets into the DSP memory, initializing a sample set memory and signaling the DSP to start running a DSP; parsing the MIDI bit stream into synthesis packets and transferring the packets to the DSP via GPP.

Arnold et al. teach interrogating the flash memory via the GPP to open a MIDI bit stream and determine sample sets to be loaded into a DSP memory associated with the DSP, loading via the GPP a DSP code associated with the sample sets into the DSP memory (col. 11, lines 1-17); initializing a sample set memory (col. 11, line 66 through col. 12, line 4); parsing the MIDI bit stream into synthesis packets (col. 11, lines 29-30), and then obviously transferring the packets to the DSP via GPP.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features mentioned above, as taught by

Arnold, in Kawashima's system in order to have a wireless handsets that would utilize flash memory to optimize the use of DSP memory by only loading required sample sets from flash, optimize space and minimize costs. These are common motivations in any system and that Arnold does not change the operation of Kawashima.

Regarding claims 2, 3 and 5, Kawashima does not explicitly teach closing the MIDI bit stream when it has been exhausted; causing the DSP to stop synthesizing the MIDI commands; and de-allocating the sample set memory. As mentioned above, it would be necessary to close the MIDI bit stream, stop synthesizing the MIDI commands and de-allocating the sample set memory in order minimize costs and optimize space.

Claims 7 and 9 are rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Kawashima teaches data storing means RAM 11 and Arnold et al. teach data storing means RAM memory 160; Kawashima further teaches first data processing means general purpose processor CPU 10 for synthesizing audio signals; data converting means a digital to analog converter DAC 35; and a second data processing means for reading and parsing the MIDI files a digital signal processor (Fig. 2, tone generator 33 employs a DSP and col. 22, lines 56-58).

Regarding claim 8, Arnold et al. teach the data storing means comprises a flash memory (col. 10, lines 56-57).

Regarding claim 10, Arnold et al. teach the first data processing means is word addressable (col. 12, line 51 – CPU 128 MB) and the second data processing means is byte addressable (col. 12, lines 55-57).

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh H. Nguyen whose telephone number is 703-305-5451. The examiner can normally be reached on Monday - Thursday from 6:30 A.M. to 5:00 P.M.
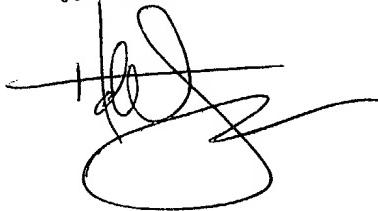
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

qhn

Quynh H. Nguyen
October 28, 2004

HECTOR A. AGDEPPA
PATENT EXAMINER